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PACIFIC  **TELESIS**
Group-Washington

October 4, 1995

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Mr. William F. Caton
Acting Chief
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

RECEIVED

OCT 4 - 1995

**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY**

Dear Mr. Caton:

Re: *MM Docket No. 94-131 - Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service; and*

PP Docket No. 93-253 - Implementation of Section 309(j) of the Communications Act - Competitive Bidding

On behalf of Pacific Telesis Enterprise Group and Cross Country Wireless Inc., please find enclosed an original and six copies of their "*Supplement to Reply To Positions To Petition For Reconsideration*" in the above proceeding.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,



Enclosures

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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

RECEIVED

OCT 4 - 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)

Amendment of Parts 21 and 74 of the)
Commission's Rules with Regard to)
Filing Procedures in the Multipoint)
Distribution Service and in the)
Instructional Television Fixed Service)

MM Docket No. 94-131

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and)

Implementation of Section 309(j))
of the Communications Act -)
Competitive Bidding)

PP Docket No. 93-253

SUPPLEMENT TO REPLY TO OPPOSITIONS
TO PETITION FOR RECONSIDERATION

Attached is the statement of Professor Paul R. Milgrom of Stanford University which further supports the Reply filed on September 28, 1995, by Pacific Telesis and Cross Country in the above-captioned proceedings. To the extent leave to file this document is necessary, it is hereby requested. The Statement does not interject new arguments but supports arguments that had already been placed in the record in timely fashion. Moreover, no one will be prejudiced by

including the statement in the record and thereby providing the Commission with a more informed basis on which to resolve the issues.

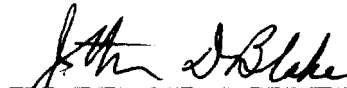
Respectfully submitted,

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PACIFIC TELESIS ENTERPRISE GROUP



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October 4, 1995

Certificate of Service

I, Carol M. Voight, a legal secretary at the law offices of Covington & Burling, do hereby certify that on this 4rd day of October, 1995, a copy of the foregoing "SUPPLEMENT TO REPLY TO OPPOSITIONS TO PETITION FOR RECONSIDERATION" was served by U.S. First Class Mail, postage prepaid, to the following:

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Carol M. Voight
Carol M. Voight

October 2, 1995

Statement of Paul R. Milgrom

1. My name is Paul R. Milgrom. I am the Shirley and Leonard Ely, Jr. Professor of Humanities and Sciences and Professor of Economics at Stanford University in Stanford, California, 94305.

2. I received an A.B. degree in Mathematics from the University of Michigan and an M.S. in Statistics and a Ph.D. in Business from Stanford University. My academic specialty is microeconomic theory and comparative economic institutions. From 1990-1994, I was coeditor of the *American Economic Review*. I have also served on the editorial boards of several other economics journals. I am the author of more than sixty books and articles and have been the recipient of numerous awards and honors, including Fellowships in the American Academy of Arts and Sciences and in the Econometric Society. I have also received Fellowship grants from the John Simon Guggenheim Foundation, the Center for Advanced Study in the Behavioral Sciences, and the Center for Advanced Studies in Jerusalem. My curriculum vitae is attached.

3. Since November of 1993, I have filed ten affidavits or statements with the Federal Communications Commission regarding auction or spectrum-related matters (including two that were co-authored with my colleague, Stanford Professor Robert Wilson). I acted as an adviser to Pacific Telesis Mobile Services during auction #4 of broadband PCS licenses at which the company acquired licenses to serve the Los Angeles and San Francisco major trading areas. In 1994, I filed an affidavit in connection with the motion to terminate the MFJ. In 1984, when the MFJ precipitated a restructuring of certain contracts between AT&T and the Southern New England Telephone Company (SNET), I advised SNET about the renegotiation of its contracts.

4. My other experience with regulatory matters includes testimony given to the Federal Energy Regulatory Commission concerning pricing on the Trans-Alaska pipeline, testimony at trial concerning the economics of the insurance contracting, and written testimony concerning environmental regulation filed with the National Oceanographic and Atmospheric Administration (NOAA).

5. I have been asked by Pacific Telesis to comment on the rules for determining which small businesses should qualify for special financial treatment during the MDS auction and how the rules are likely to affect economic efficiency.

6. The primary economic rationale for bidding credits and special financing arrangements lies in the presumed inability of smaller businesses to raise the funds necessary to compete in a particular business, despite other qualifications to compete. To the extent this presumption is complete and correct, a system of credits and license financing arrangements for small businesses competing in the auctions can help to avoid excessive concentration of economic activity in a few large firms while doing little or no damage to the efficient operation of licenses in the new wireless markets.

7. In order to have this desired effect, however, the preferences need to be carefully tailored and targeted so that they benefit only those businesses for which financing constraints are significant. One of the lessons of auction #3 — the regional narrowband auction of October, 1994 — is that a too-widely targeted credit can be self-defeating. In that auction, the designated entity (DE) bidders were unable to benefit from their 40% bidding credit. Encouraged by the bidding credit, they bid so aggressively against one another that the net prices they paid were just as high as those paid by the other bidders. The result was that the license assignments and prices were probably the same as if no credit had been offered at all. A credit based on more restrictive qualification rules would have been more likely to assign licenses to and reduce the prices for financially disadvantaged bidders.

8. Generally, a too inclusive a standard for small businesses preferences can be counter-productive in several ways. First, compared to a more narrowly targeted standard, a too inclusive standard makes it less likely that the smallest businesses that are actually disadvantaged will acquire licenses. For by providing the same credits to larger, advantaged bidders, it cancels any advantage created by the credits for smaller bidders. Second, if a genuine small bidder does acquire licenses at auction, a too inclusive standard increases the likely price that it must pay. The

reason is that the auction price is set by the amount that the losing bidder is willing to pay, which will be raised to the extent of the losing bidder's credit. Finally, in competition between intermediate sized businesses and larger businesses, where neither has actual problems financing an investment in MDS, a credit may result in the license being awarded to the intermediate sized bidder even when it has higher costs and lesser capabilities. If that happens, consumers would be among the main losers.

9. At present, the public companies offering wireless cable services all have average gross revenues for 1992-1994 of under \$11 million. Using a \$40 million average revenue rule to define a small business as WCAI advocates, only Cross Country Wireless, on account of its affiliation with Pacific Telesis, would currently fail to qualify (though changing business alliances may alter this in the future).

10. The existing MDS companies qualifying as small businesses under the \$40 million standard include many that have no difficulty raising public debt and equity capital. Partly, this is because the three year average revenue standard is misleading in an industry like MDS in which the growth is rapid. Whatever the reason, the recent successes of these companies in raising hundreds of millions of dollars in capital testifies to their ability to access the capital markets.¹

11. This is an industry in which there are many local markets in which genuinely small businesses could potentially provide standalone services to local customers. Unlike companies providing PCS and other mobile radio services, there is much less need for wireless cable companies to assemble large geographic blocks or to coordinate with other suppliers to provide

¹In 1995 alone, PCTV had a debt offering of \$175 million, Heartland had a debt offering of \$100 million, Videotron had a debt offering of \$150 million, CAI got \$100 million in debt capital from Bell Atlantic and NYNEX, and Boston Ventures invested \$35 million in Wireless Broadcasting System. This is in addition to 1994 financing of \$50 million for PCTV from Blackstone, \$40 million for Heartland from Jupiter Partners, and a \$100 million debt offering for American Telecasting. Sources: (1) *The Wireless Cable Industry*, Alex Brown & Sons, report, June 27, 1995, (2) *The 1995 Wireless Cable Databook*, Paul Kagan Associates.

“roaming” services. There may be many business opportunities for small companies to provide wireless cable service to customers in small and medium sized local markets. However, setting the MDS small business revenue standard at \$40 million would fail to provide the necessary encouragement for small new entrants with limited access to capital markets.

12. To achieve the economic objective described in paragraph 6, bidding credits should be limited to those who are expected to have difficulty financing their MDS investments from internal sources of funds. The need for service-specific standards that reflect the required levels of investment has been repeatedly acknowledged by the Commission. The appropriate size standard for small MDS businesses can be set in reference to the standard used for other auctions using estimates of investment costs for various kinds of service.

11. The infrastructure cost estimates used for my analysis are shown in the table on the next page. The sources on which I rely are indicated in the footnotes on the next page. The MDS cost estimates are based on developing systems with investments that are suitable to small, medium and large markets, with analog systems using perhaps twelve channels for the smallest markets, analog systems using perhaps 30 channels for medium markets, and high capacity digital systems for dense metropolitan markets like Los Angeles. The largest investments are beyond the reach of most small businesses.

12. In developing these figures, I have excluded the cost of MDS customer premises equipment. Such equipment can often be vendor-financed. Moreover, the equipment costs are incurred only as customers are added, which puts these costs in a different and less problematic category than fixed infrastructure investments. For better comparability, the other cost estimates also exclude phones, pagers and other equipment in the hands of the customers.

Infrastructure Cost Estimates

Service Type	Per pop	Typical Total	Small Business Revenue Threshold
PCS-Broadband	\$15.00-30.00 ²	\$10-200 million	\$40 million
PCS-Narrowband	\$0.06-0.22 ³	\$3.5-11.0 million	\$40 million
900 MHz SMR	\$.10-.15 ⁴	\$0.6-4.0 million	\$3 and \$15 million ⁵
MDS - Small market ⁶	\$3.75	\$0.75 million	?
MDS - Med market	\$1.23	\$1.1 million	?
MDS - Los Angeles	\$1.30	\$13.0 million	NA

12. It appears that one can rationalize the Commission's previous decisions about the small business threshold using a ratio of three-year-average revenue to the investment required for a typical small system of four to one and cost estimates similar to those reported in the table. The ratio of four to one corresponds to estimated infrastructure investments of \$10 million for a PCS broadband license for a single MTA or BTA, \$10 million for a regional narrowband system, and \$0.75 to \$3.75 million for a 900 MHz SMR system. A comparable standard in which

²These are analysts' estimates as reported in the *Wall Street Journal* by Gautam Naik and Daniel Pearl on March 14, 1995. Pacific Bell Mobile Services has estimated \$21.00/pop for these costs.

³The \$3.5 million figure is the FCC's own initial estimate of building out a regional paging system, as reported in footnote 40 of the Third Competitive Bidding Report and Order. The \$0.22 per pop (\$11 million total) estimate is based on a report by Paul Kagan Associates. I have used its cost estimates for the Motorola FLEX system, because Kagan reports that technology "is already considered the technology of choice." Total build-out costs vary less among narrowband licenses than licenses for other services because regions were defined to reduce population variations. Each of the five narrowband regions has a population of about 50 million.

⁴In the *Second Order on Reconsideration and Seventh Report and Order* released September 14, 1995, ¶150, the Commission cites an SBA estimate that the cost of building a system to serve an MTA "could range between \$500,000 and \$750,000," which understates the likely variation. Dividing these figures by the average MTA figure of 5 million pops yields the cost/pop figure reported here. The typical total costs results from multiplying the cost/pop by a range of MTA population sizes.

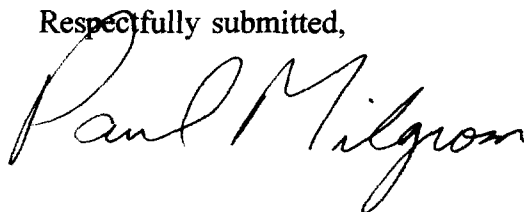
⁵The FCC adopted a two-tier system for this service. For the smallest bidders, winning bids will be discounted by 15%, initial deposits are just 10% of the price, and financing is five-year interest only with the balance payable over the remaining license term. For the next tier, winning bids will be discounted by 10%, initial deposits are 10%, financing is two-year interest only with the balance payable over the remaining license term.

⁶All MDS cost estimates were supplied by Pacific Telesis.

a small business was expected to purchase a single license to serve a small- or medium-sized MDS market and to make the corresponding investment would lead to a revenue standard of between \$3.0 million and \$4.5 million. Such a standard would allow genuine small businesses to compete for licenses on terms similar to those established by the Commission for broadband, narrowband, and 900 MHz specialized mobile radio.

13. In summary, to be effective, a bidding credit must be targeted narrowly to the smallest businesses that could serve the desired markets. In this case, the small business thresholds used for auctions of other services support are consistent with setting a threshold for a small MDS business in the range of \$3.0-4.5 million.

Respectfully submitted,

A handwritten signature in black ink, reading "Paul Milgrom". The signature is written in a cursive, flowing style with a large initial "P" and "M".